UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/549,912	09/20/2005	Roberto Alvarez Arevalo	36-1925	4788

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EXAMINER
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ART UNIT	PAPER NUMBER
4152	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/549,912	ALVAREZ AREVALO ET AL.
	Examiner	Art Unit	
	MARSHALL MCLEOD	4152	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>20 September 2005</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
    closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-10</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-10</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>20 September 2005</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
         application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>30 December 2005</u>.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____

5)☐ Notice of Informal Patent Application

6)☐ Other: _____

DETAILED ACTION

1.   Claims 1-10 are pending in this application. Claims 3-6 are being amended by an

amendment filed 9/20/2005.

Priority

2.   Examiner acknowledges applicant's foreign priority based on United Kingdom

0306973.9 filed 3/26/2003.

Specification

3.   The following guidelines illustrate the preferred layout for the specification of a utility

application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include
the following sections in order. Each of the lettered items should appear in upper case, without
underlining or bold type, as a section heading. If no text follows the section heading, the phrase
"Not Applicable" should follow the section heading:

    (a) TITLE OF THE INVENTION.
    (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
    (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR
            DEVELOPMENT.
    (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
    (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A
            COMPACT DISC.
    (f) BACKGROUND OF THE INVENTION.
            (1) Field of the Invention.
            (2) Description of Related Art including information disclosed under 37 CFR 1.97
            and 1.98.
    (g) BRIEF SUMMARY OF THE INVENTION.

     (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
     (i) DETAILED DESCRIPTION OF THE INVENTION.
     (j) CLAIM OR CLAIMS (commencing on a separate sheet).
     (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
     (l) SEQUENCE LISTING (See MEPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence
          Listing" is required on paper if the application discloses a nucleotide or amino
          acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence
          Listing" is not submitted as an electronic document on compact disc).

Claim Objections

4.   The following claims are objected to for lack of antecedent basis: "maximum error

values", claim 1 (line 13); claim 2 (lines 10, 15, and 17); claim 9 (line 11); claim 10 (lines 12 and

14).

Claim Rejections - 35 USC § 112

5.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

     The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
     subject matter which the applicant regards as his invention.

6.   **Claims 1-2, and 9-10 are rejected under 35 U.S.C. 112, second paragraph, as being**

indefinite for failing out particularly point out and distinctly claim the subject matter

which applicant regards as the invention.

7.   With respect to claim 1 (line 10), claim 2 (lines 7), claim 9 (line 10), and claim 10, (line

7), "the maximum value of a <u>timing error</u>". A timing error is not defined in the claim, making

the claim vague and indefinite. It is not clear how the time is being calculated for the number of

portions to be sent, why it is an error, and what is the meaning of the maximum of this error.

Appropriate clarification is required.

8.   With respect to claim 1 (line 8), claim 2 (line 13), claim 9,(line 7), and claim 10 (line 11),

"the state of a <u>receiving buffer</u>". The specification does not make clear, the specific information

about the state of the receiving buffer. It is not clear how many different states the receiving

buffer will have and how they will impact functionality, which renders the claim vague and

indefinite.

Claim Rejections - 35 USC § 101

15.   U.S.C. 101 reads as follows:

> 35 Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter,
> or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and
> requirements of this title.

16.   Claims 7 and 8 are rejected under 35 U.S.C. 101 because they are directed toward

non-statutory subject matter.

17.   With respect to claims 7 and 8, the claims fail to place the invention squarely within one

statutory class of invention. As a person skilled in the art the term "carrier" is interpreted in its

plain meaning to mean, a "signal". As such, the claim is drawn to a form of energy. Energy is

not one of the four categories of invention and therefore this claim(s) is/are not statutory. Energy

is not a series of steps or acts and thus is not a process. Energy is not a physical article or object

and as such is not a machine or manufacture. Energy is not a combination of substances and

therefor not a composition of matter.

18. With respect to claims 7 and 8, the claims fail to place the invention squarely within one statutory class of invention. Claiming a "video recording" the claims lack the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 USC 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best, functional descriptive material *per se*. Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." Both types of "descriptive material" are nonstatutory when claimed as descriptive material *per se*, 33 F.3d at 1360, 31 USPQ2d at 1759.

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

20. **Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aharoni et al. (Patent No US 6,014,694), hereinafter Aharoni, in view of Kubler et al. (Pub. No US 2003/0002482 A1), hereinafter Kubler and further in view of Casper et al. (Patent No US 5,025,458), hereinafter Casper.**

21.   With respect to claim 1, Aharoni discloses A method of transmitting an encoded

sequence over a network to a terminal (Aharoni, Column 2, lines 16-20), comprising

     a.   storing a plurality of encoded versions of the same sequence (Aharoni, Column 2,

lines 29-32), wherein each version comprises a plurality of discrete portions of data

(Aharoni, Column 2, lines 32-39; i.e. discrete portions of data = subset of levels) and

each version corresponds to a respective different degree of compression (Aharoni,

Column 2, lines 20-21; i.e. different degree of compression = ...the system adjusts the

compression ratio);

     b.   transmitting a current one of said versions (Aharoni, Column 7, line 67, and

continued through to Column 8, lines 1-3);

     c.   ascertaining the data rate permitted by the network (Aharoni, Column 11, lines

30-37);

     d.   ascertaining the state of a receiving buffer at the terminal (Aharoni, Column 16,

lines 61-67);

     e.   for at least one candidate version, computing in respect of at least one discrete

portion thereof as yet unsent the maximum value of a timing error that would occur were

any number of portions starting with that portion to be sent at the currently ascertained

permitted rate (Aharoni, Column 17, lines 52-59);

     f.   selecting one of said versions for transmission, in dependence on the results of

said comparisons; and transmitting the selected version (Aharoni, Column 2, lines 60-61).

Aharoni does not disclose a timing error and comparing the determined maximum error

values with the ascertained buffer state.   However, Kubler discloses a timing error

(Kubler, Page 20, [0299] lines 1-11).

It would have been obvious to a person having ordinary skill in the art at the time of the

invention to modify the teachings of Aharoni with the teachings of Kubler in order to have an

efficient error correction system and increase the quality and reliability of transmissions.

The combination of Aharoni and Kubler do not disclose comparing the determined maximum

error values with the ascertained buffer state. However, Casper discloses comparing the

determined maximum error values with the ascertained buffer state (Casper, Column 16, Claim

8).

It would have been obvious to a person having ordinary skill in the art at the time of the

invention to modify the teachings of Aharoni and Kubler with the teachings of Casper in order to

have an efficient error correction system and increase the quality and reliability of transmissions.

22.   With respect to claim 2, Aharoni as modified discloses A method of transmitting an

encoded sequence over a network to a terminal (Aharoni, Column 2, lines 16-20), comprising

g.   storing a plurality of encoded versions of the same sequence (Aharoni, Column 2,

lines 29-32), wherein each version comprises a plurality of discrete portions of data

(Aharoni, Column 2, lines 32-39; i.e. discrete portions of data = subset of levels) and

each version corresponds to a respective different degree of compression (Aharoni,

Column 2, lines 20-21; i.e. different degree of compression = …the system adjusts the

compression ratio);

h.   for each version and for each of a plurality of nominal transmitting rates,

computing in respect of at least one discrete portion thereof the maximum value of a

timing error (Kubler, Page 20, [0299] lines 1-11; i.e. timing error) that would occur were

any number of portions starting with that portion to be sent at the respective nominal rate

(Aharoni, Column 17, lines 52-59);

i.   storing said maximum error values (Casper, Column 15, Claim 3);

j.   transmitting a current one of said versions (Aharoni, Column 7, line 67, and

continued through to Column 8, lines 1-3);

k.   ascertaining the data rate permitted by the network (Aharoni, Column 11, lines

30-37);

l.   ascertaining the state of a receiving buffer at the terminal (Aharoni, Column 16,

lines 61-67);

m.   for at least one candidate version, using the ascertained permitted data rate and the

stored maximum error (Casper, Column 15, Claim 3) values to estimate a respective

maximum error value corresponding to said ascertained permitted data rate (Aharoni,

Column 17, lines 52-59);

n.   comparing the estimated maximum error values with the ascertained buffer state

(Casper, Column 16, Claim 8);

o.   selecting one of said versions for transmission, in dependence on the results of

said comparisons; and transmitting the selected version (Aharoni, Column 2, lines 60-61).

23.   With respect to claim 3, it is rejected for the same reasons as claim 1 above. In addition

Aharoni as modified discloses wherein maximum timing error determination is performed

(Kubler, Page 20, [0299] lines 1-11) only for selected ones of said portions at which a version

change is to be permitted (Aharoni, Column 9, lines 20-26).

24.   With respect to claim 4, it is rejected for the same reasons as claim 1 above. In addition

Aharoni as modified discloses in which each computed timing error value (Kubler, Column 9,

lines 21-26; i.e. timing error) is the difference between (a) the time needed to transmit, at the

relevant rate, the portion in question and zero or more consecutive subsequent portions up to and

including any particular portion (Aharoni, Column 2, lines 15-28), and (b) the difference

between the playing instant of the respective particular portion and the playing instant of the

portion preceding the portion in question (Aharoni, Column 17, lines 40-49).

25.   With respect to claim 5, it is rejected for the same reasons as claim 1 above. In addition

Aharoni as modified discloses in which the sequence is a video sequence (Aharoni, Column 17,

lines 40-49).

26.   With respect to claim 6, it is rejected for the same reasons as claim 1 above. In addition

Aharoni as modified discloses in which the sequence is an audio sequence (Aharoni, Column 18,

lines 36-37; i.e. AVI can just be an audio sequence).

27.   With respect to claim 7, Aharoni as modified discloses a video recording stored (Aharoni,

Column 7, lines 49-55) on a carrier, comprising

        p.   a plurality of encoded versions of the same sequence (Aharoni, Column 2, lines

        29-32), wherein each version comprises a plurality of discrete portions of data (Aharoni,

        Column 2, lines 32-39; i.e. discrete portions of data = subset of levels) and each version

        corresponds to a respective different degree of compression (Aharoni, Column 2, lines

        20-21; i.e. different degree of compression = …the system adjusts the compression ratio);

        q.   and for each discrete portion of each version and for each of a plurality of

        nominal transmitting rates, a maximum error value for that portion, being the maximum

        of (a) the value of a timing error (Kubler, Page 20, [0299] lines 1-11; i.e. timing error)

        that would occur were that portion to be sent at the respective nominal rate (Aharoni,

        Column 17, lines 52-59);

        r.   and (b) the values of a timing error that would occur were that portion and any

        number of subsequent portions subsequent thereto to be sent at the respective nominal

        rate (Aharoni, Column 17, lines 52-59).

28.   With respect to claim 8, Aharoni as modified discloses an audio recording stored

(Aharoni, Column 7, lines 49-55) on a carrier, comprising

        s.   a plurality of encoded versions of the same sequence (Aharoni, Column 2, lines

        29-32), wherein each version comprises a plurality of discrete portions of data (Aharoni,

        Column 2, lines 32-39; i.e. discrete portions of data = subset of levels) and each version

corresponds to a respective different degree of compression (Aharoni, Column 2, lines
20-21; i.e. different degree of compression = …the system adjusts the compression ratio);

t.   and for each discrete portion of each version and for each of a plurality of
nominal transmitting rates, a maximum error value for that portion, being the maximum
of (a) the value of a timing error (Kubler, Column 9, lines 21-26; i.e. timing error) that
would occur were that portion to be sent at the respective nominal rate (Aharoni, Column
17, lines 52-59);

u.   and (b) the values of a timing error that would occur were that portion and any
number of subsequent portions subsequent thereto to be sent at the respective nominal
rate (Aharoni, Column 17, lines 52-59).

29.   With respect to claim 9, Aharoni as modified discloses a store (Aharoni, Column 16,
lines 50-60; i.e. store = database) storing a plurality of encoded versions of the same sequence
(Aharoni, Column 2, lines 29-32), wherein each version comprises a plurality of discrete portions
of data (Aharoni, Column 2, lines 32-39; i.e. discrete portions of data = subset of levels) and
each version corresponds to a respective different degree of compression (Aharoni, Column 2,
lines 20-21; i.e. different degree of compression = …the system adjusts the compression ratio);

v.   a transmitter (Aharoni, Column 17, lines 19-21); and

w.   control means operable to receive data as to the data rate permitted by the network
and data as to the state of a receiving buffer at the terminal (Aharoni, Column 3, lines 65-
67 continued through to Column 4, lines 1-7) and, for at least one candidate version, to
compute in respect of at least one discrete portion thereof as yet unsent the maximum

value of a timing error (Kubler, Page 20, [0299] lines 1-11; i.e. timing error) that would

occur were any number of portions starting with that portion to be sent at the permitted

rate (Aharoni, Column 17, lines 52-59), to compare the determined maximum error

values with the buffer state (Casper, Column 16, Claim 8) and to select one of said

versions for transmission, in dependence on the results of said comparisons (Aharoni,

Column 2, lines 60-61).

30.   With respect to claim 10, Aharoni as modified discloses a store (Aharoni, Column 16,

lines 50-60; i.e. store = database) storing a plurality of encoded versions of the same sequence

(Aharoni, Column 2, lines 29-32), wherein each version comprises a plurality of discrete portions

of data (Aharoni, Column 2, lines 32-39; i.e. discrete portions of data = subset of levels) and

each version corresponds to a respective different degree of compression (Aharoni, Column 2,

lines 20-21; i.e. different degree of compression = …the system adjusts the compression ratio),

each version including, for each of a plurality of nominal transmitting rates, in respect of at least

one discrete portion thereof, the maximum value of a timing error that would occur were any

number of portions starting with that portion to be sent at the respective nominal rate (Aharoni,

Column 17, lines 52-59);

        x.   a transmitter (Aharoni, Column 17, lines 19-21); and

        y.   control means operable to receive data as to the data rate permitted by the network

        and data as to the state of a receiving buffer at the terminal (Aharoni, Column 3, lines 65-

        67 continued through to Column 4, lines 1-7) and, for at least one candidate version, to

        compute in respect of at least one discrete portion thereof as yet unsent the maximum

value of a timing error (Kubler, Page 20, [0299] lines 1-11; i.e. timing error) that would

occur were any number of portions starting with that portion to be sent at the permitted

rate (Aharoni, Column 17, lines 52-59), to compare the estimated maximum error values

with the buffer state (Casper, Column 16, Claim 8) and to select one of said versions for

transmission, in dependence on the results of said comparisons (Aharoni, Column 2, lines

60-61).

Conclusion

32.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

    a.   Pian et al. (Patent No US 6,366,614 B1) teaches a system and method for

    controlling the encoded data rate in a video compression procedure.

33.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to MARSHALL MCLEOD whose telephone number is (571)270-

3808. The examiner can normally be reached on Monday - Friday 7:30 a.m-5:00 p.m..

    If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Nabil El-Hady can be reached on (571) 272-3963. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

M.M.   1/16/2008

/Nabil El-Hady/
Supervisory Patent Examiner, Art Unit 4152